

# MegaLink 1290X



## MEGALINK 1290X TECHNICAL SPECIFICATIONS



### DESCRIPTION

The MegaLink 1290X (ML1290X) transmits SDI component quality video over fiber optics. Because of its flexible architecture and superior performance, the ML1290X is paramount to today's non-compressed digital video networks.

### KEY FEATURES

- ▶ Non-compressed transmission of 270 Mbps serial 4:2:2 video
- ▶ Dual clock recovery for jitter free performance
- ▶ On-line diagnostics with local and remote alarms
- ▶ Major & minor alarm contacts for system monitoring
- ▶ Compatible with serial digital routers
- ▶ SDI/SDTI/ASI compatible
- ▶ Multi-port optical repeater (1 input/4 outputs (max.))
- ▶ WDM compatible for multi-channel applications
- ▶ NEBS, UL, CSA, CE, FCC & Bellcore common language compliant

### CONFIGURATIONS

- ▶ Point-to-point transmission (bi-directional and uni-directional)
- ▶ SDI repeater
- ▶ Point-to-multi-point with drop/add/pass capability
- ▶ Digital video switch interface & transparent regeneration

### APPLICATIONS

- ▶ Studio-to-post production links
- ▶ Post production to distribution connections
- ▶ Studio-to-transmitter links
- ▶ Transports D1 and D5 tape formats, SDI, and SDTI
- ▶ Switched digital video networks
- ▶ Ad agency/client approval
- ▶ Intra-studio connections

The combination of flexibility and Artel's renowned performance makes the ML1290X the choice for quality digital video transmission. To address the increasing cost and risk factors associated with physically transporting video tape and film, Artel has developed the ML1290X system to enable film, post production, and broadcast industries to maximize efficiency, reduce operating costs, and eliminate "sneaker net."

The ML1290X system transports non-compressed SMPTE 259M 4:2:2 component video (such as D1 and D5) over a fiber optic network transparently, while maintaining superior jitter-free quality. Utilization of the ML1290X system eliminates the costly delays involved in moving video between locations, and in the production and distribution process in general. One of the major advantages the ML1290X provides is the ability for post production facilities to complete final edits and transmit a finished product under tight deadlines. The system reduces the time and costs inherent in moving video between all locations involved in the production and distribution process.

With digital video becoming more dominant in the distribution channel, the ML1290X can provide unsurpassed local area transmission from the source to the distribution gateway. ML1290X fiber optic networks are being deployed to carry digital content for distribution to satellite carriers, TV studios, long-haul fiber carriers, and regional switching centers.

**VIDEO PERFORMANCE SPECIFICATIONS**

Serial Digital Component Video 4:2:2 Conforms to:  
SMPTE 259M, ITU BT.656  
D1 Component Video

Signal Resolution	10 Bits
Nominal Bit Rate	270 Mbps
Video Standard	525/625 Lines
Tracking Range	± 100 ppm (min.)
Bit Error Rate	<10 <sup>-12</sup>
DC Offset	<± 0.5 Volts
Signal Amplitude	800 mV ±10%
Jitter	<740 picoseconds (peak-peak)
Electrical Input/ Output Impedance	75 Ω
Connector Type	BNC 75 Ω

Transparent Transport of the Pathological Signal:  
SDI Check Field as described in SMPTE EG-34 & RP178

**OPTICAL SPECIFICATIONS**

**Optical Receiver**

Optical Sensitivity	-34 dBm (min.) @ 1310 nm
Maximum Input	-1 dBm (min.) Operating
Input Wavelength	1200 to 1600 nm
Input Aperture	62.5 Microns
Optical Connector	FC/PC female SM
Connector Loss	0.25 dB (max.)

**Standard Transmitters**

Optical Output Power	0 dBm (min.)
Optical Wavelength	1310 nm ± 30 nm
Spectral Width	4 nm FWHM (max.)
Optical Connector	FC/PC female SM
Connector Loss	0.25 dB (max.)

**Long Range Transmitters**

Optical Output Power	0 dBm (min.)
Optical Wavelength	1550 nm ± 35 nm
Spectral Width	1 nm FWHM (max.)
Optical Connector	FC/PC female SM
Connector Loss	0.25 dB (max.)

**PHYSICAL SPECIFICATIONS**

**Environmental**

Operating	0 to 40° C
Storage	-40 to +80° C

**Mechanical**

1 RU 19" Rack Mountable Enclosure	
Dimensions	1.75" (H) x 19.0" (W) x 10.5" (D)
Weight	7.5 lbs

**Power Input Voltage**

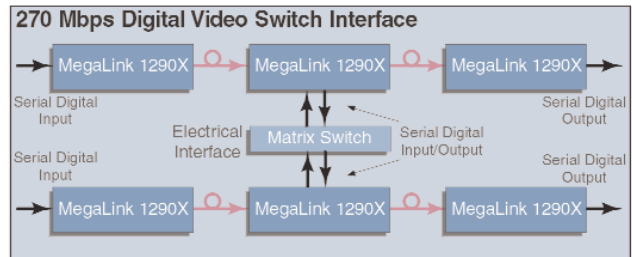
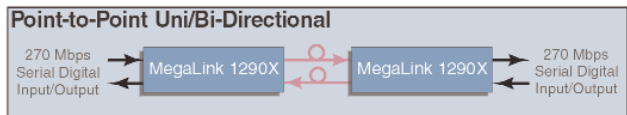
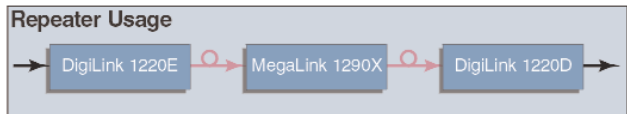
AC	90 to 254 VAC; 47 to 63 Hz
DC	-38.4 to -57.6 VDC (VDC nominal)
Power Consumption	55 Watts (max.)
BTU/hr	190

**Standard Compliance**

UL 1950, EN 60950, FCC Part 15, EN55022,  
ICES-003, Bellcore NEBS equivalent, Common Language

Note: Specifications are subject to change without notice.

**CONFIGURATION DIAGRAMS**



[WWW.ARTEL.TV](http://WWW.ARTEL.TV)

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